Bruhat Bangalore Mahanagara Palike
Executive Engineer Yelahanka Division

NAME OF WORK:- Drilling Of Borewells And Providing Pipelines In 110 Villages Areas of Attur Ward No-03.

								Estimation Cost.Rs	Rs. 112.00 Lakhs	
Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount	
			No.	L	B	D				
	NEW BOREWELL(A)									
1	**Geophysical investigation** at site for sinking borewells for Providing drinking water to the habitation either through the Hand Pump MWS or P.W.S.S, by vertical electrical sounding by adopting Venner or Schlumbergers's method, including reconnaissance survey of geological formation. Geophysical investigation of existing ground water in the vicinity, its quality, quantity and acceptability of the users, indicating the location of the site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 metre in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instruments and accessories to work site, engaging technical personal and labour required etc. NOTE: 1) Additional rate on item 1&2 is allowed for drilling in over burden and fixing Casing pipes beyond 20 M (for fixing Casing pipes only) a) Above 20 M and upto 30 M - 15%, b) Above 30 M - 30% (Measurement of overburden is restricted to the depth of casing pipe fixed excluding initial depth of 20M and projection above ground level). 2) A sum of Rs. 100/- is to be deducted for Dry Borewell towards yield test. etc. complete. (P.140, I.No-12.40) Vol-5 BWSSB.SR 2023-24									
		Each	7	1.00			**7.00**	**5288.00**	**37016.00**	
	Basic Rate	**5288.00**								
2	Sinking of Borewell of 165mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burdern upto 20 m. Fixing of casing pipes, collars and cap with necessary cutting, threading and welding including transportation of rig and supporting vehicle, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (Excluding cost of casing pipes, collars, cap etc., complete) (P.139, I.No-12.2.1) Vol-5 BWSSB.SR 2023-24									
	0-50mtrs	**Mtr**	7	50.00			**350.00**	**370.00**	**129500.00**	
	Basic Rate	**370.00**								
3	50-100mtrs(P.139, I.No-12.1.2) Vol-5 BWSSB.SR 2023-24	**Mtr**	7	50.00			**350.00**	**464.00**	**162400.00**	
	Basic Rate	**464.00**								
4	100-150mtrs (P.139, I.No-12.1.3) Vol-5 BWSSB.SR 2023-24	**Mtr**	7	50.00			**350.00**	**493.00**	**172550.00**	
	Basic Rate	**493.00**								
5	150-200mtrs ((P.139, I.No-12.1.4) Vol-5 BWSSB.SR 2023-24	**Mtr**	7	50.00			**350.00**	**572.00**	**200200.00**	
	Basic Rate	**572.00**								
6	200-250mtrs (P.139, I.No-12.1.5) Vol-5 BWSSB.SR 2023-24	**Mtr**	7	50.00			**350.00**	**671.00**	**234850.00**	
	Basic Rate	**671.00**								
7	250-300mtrs (P.139, I.No-12.1.6) Vol-5 BWSSB.SR 2023-24	**Mtr**	7	50.00			**350.00**	**740.00**	**259000.00**	
	Basic Rate	**740.00**								
8	300-350mtrs (P.139, I.No-12.1.7) Vol-5 BWSSB.SR 2023-24	**Mtr**	7	50.00			**350.00**	**868.00**	**303800.00**	
	Basic Rate	**868.00**								

No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
9	350 to 400 mtr (P.139, I.No-12.1.8) Vol-5 BWSSB.SR 2023-24	Mtr	7	50.00			350.00	937.00	327950.00
	Basic Rate	937.00							
10	Supply of ISI mark 175mm nominal bore,plain and steel casing pipe grade of steel Fe 410 of wall thickness conforming to IS 4270-2001 and latest ammendments, electrical resistance welded steel tubes, material and conforming to IS 1387-1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5-7m both ends.threaded conforming to IS 554-1985 one end fixed with socket conforming to IS 4270-2001 and the other end with screwed pipes all shall be responsibaly free from defects. The tubes shall be responsible straight end should be with ISI marking weighing 25.10kg/m.prices include Collar-Medium duty.. (P.143, I.No-12.32) Vol-5 BWSSB.SR 2023-24								
		Mtr	7	75.00			525.00	1933.00	1014825.00
	Basic Rate	1933.00							
11	Providing and fixing MS casing collars as per IS 1239 (part-II) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments. (P.143, I.No-12.33) Vol-5 BWSSB.SR 2023-24								
		Each	7	12.00			84.00	150.00	12600.00
	Basic Rate	150.00							
12	PVC pipes of 10 Kg/cm2 for 200mm (P.NO-A-44, SL.No-664) Vol-5 BWSSB.SR 2023-24								
		Mtr	7	12.00			84.00	1155.00	97020.00
	Basic Rate	1155.00							
13	Providing and laying at site of work MS casing caps as per IS 1239 (partII) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments including cost of material and labour charges for fixing, if any etc. complete with all lead and lifts and as directed by the Engineer in charge (P.143, I.No-12.34) Vol-5 BWSSB.SR 2023-24								
		Each	7	1			7.00	164.00	1148.00
	Basic Rate	164.00							
14	Providing, Supplying to work site, Submersible Pump Set of 150mm dia suitable for bore well and confirming to IS 8034-2000;3Phase, SS Bowl & Impeller with Low volt Motor as per specifications,as per necessary ammendments and instructions of engineer incharge of work. 15.00 HP - 120 LPM @ 266 m = 23 STG Outlet Dia - 2.00" [P.153, I.No-13.18.6) Vol-5 BWSSB.SR 2023-24]								
	For New Borewells	Each	7	1.00			7.00	69344.00	485408.00
	Basic Rate	69344.00					7.00		
15	Supply and delivery of galvanized mild steel tubes of 6mtr standard length heavy duty (C Class) as per IS 1239 (Part-I) 1990 with latest amendments with ISI Mark 50mm [P.155, I.No-13.27.1) Vol-5 BWSSB.SR 2023-24]								
	For New Borewells	Each	7	60.00			420.00	3050.00	1482300.00
	For Existing Borewells		3	22.00			66.00		
	Basic Rate	3050.00					486.00		
16	Supply and delivery at site wrought middle steel (galvanized) GI union confirming to IS 1239-II, 1991 with latest amendments if any. For 50 mm dia GI Union (BWSSB SR 2023-24 P-131, I-11.12.6)								
		Each	7	1			7.00	267.00	1869.00
	Basic Rate	267.00							
17	Providing wrought mild steel (galvanized) GI collar confirming to IS 1239-II, 1991 with latest amendments if any For 50 mm dia GI collar(P.129, I.No-11.6.6) Vol-5 BWSSB.SR 2023-24								
	For New Borewells	Each	7	61			427.00	267.00	136437.00
	For Existing Borewells		3	28.00			84.00		
	Basic Rate	267.00					511.00		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
18	Supply and delivery at site wrought middle steel (galvanized) 50 mm dia GI hexagonal nipple confirming to IS 1239-II, 1991 with latest amendments if any. (P.132, I.No-11.14.6) Vol-5 BWSSB.SR 2023-24								
		Each	7	2			14.00	213.00	2982.00
	Basic Rate	213.00							
19	Supply and delivery at site wrought middle steel (galvanized) 50 mm dia GI elbow confirming to IS 1239-II, 1991 with latest amendments if any for: (P.129, I.No-11.7.6) Vol-5 BWSSB.SR 2023-24								
		Each	7	2			14.00	267.00	3738.00
	Basic Rate	267.00							
20	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to13:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100 V as per IS-694:2010. 3C x 6 mm2 (P.7, I.No-2.6.3) Vol-VI [PWD Ele S.R 2023-24]								
	For New Borewells	Mtr	7	765.00			5355.00	245.00	1311975.00
21	Labour charges for Erection, Electrification and commissioning of Pump sets, including aligning and balancing of all items including supply and erection of two pair of supporting clamps, bore well caps, cable clips and water tight gland cable protectors, bolts, nuts, valve and gauges,tools and equipments etc., involved in the job as per specifications, with necessary tests as per specifications, with testing of as per instructions of engineer incharge of work. (P.156, I.No-13.32) Vol-5 BWSSB.SR 2023-24								
		Job	7	1			7.00	6500.00	45500.00
	Basic Rate	6500.00							
22	Labour charges for erection of outdoor type panel board and meter board units with all necessary materials and labour, tools and equipments including providing cement concrete foundation bed etc., complete as per specification, with testing of as per instructions of engineer incharge of work. (P.156, I.No-13.34) Vol-5 BWSSB.SR 2023-24								
		Job	7	1			7.00	1450.00	10150.00
	Basic Rate	1450.00							
23	1.1 kV, XLPE or Heat resistant PVC insulated, PVC exutruted Inner Seath Armoured LTUG Cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness and resistivity as per IS-3975 16 Sqmm, 4 Core, (11 GI Strips - 4 x 0.8 mm) (P.13, Sl. no-201, I.No-32.05) Vol-VI ESCOM.SR [CSR-2023-24]								
		Km	7	45.00			315.00	141842.00	44680.23
							0.32		
24	LABOUR For Stringing of 1.1 kV grade Aerial Bunched 3 Core cable of XLPE insulation of size (3x95) (Phase Conductor) + (1x70) (Insulated Messenger Neutral) + (1x16) (Street Light Control) (P.53, Sl. no-208, I.No-24.03) Vol-VI ESCOM.SR [CSR-2023-24]								
		Km	7	45.00			315.00	33109.00	10429.34
							0.32		
25	Earthing: Supplying and fixing and wiring earth electrode for grounding circuits IC cutouts and other equipments on the meter board in the pit. The pits should be filled up with equal proportion of salt and charcoal 150mm around the pipe to complete depth. The connection from the pipe to the conduits etc. is to established through GI wire of sizes as per clause 7.3.3 of IS 732 using 12mm bolts, nuts, washers and check nuts, the pipe shall have 16 through holes of 12mm dia (P.157, I.No-13.39) Vol-5 BWSSB.SR 2023-24)								
		Job	7	1			7.00	3750.00	26250.00
	Basic Rate	3750.00							

No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
26	Providing,Supplying and fixing suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps,bolts,nuts and washers etc. with necessary materials and labour tools and equipments as per instructions of engineer incharge of work. 3½x6 Sqm (P.156, I.No-13.38.1) Vol-5 BWSSB.SR 2023-24)								
		Each	7	1			**7.00**	**375.00**	**2625.00**
	Basic Rate	**375.00**							
27	Supply and fixing polished wood board made of not less than 15mm thick plank on both sides of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws 20" x 20" x 2.5" (P.14, I.No-5.6.6) Vol-VI [PWD Ele S.R 2023-24]								
	For New Borewells	**Nos**	7	1			7.00	**326.13**	**4239.69**
	For Existing Borewells		6	1			6.00		
	Basic Rate	**326.13**					**13.00**		
28	Supply and delivery at site brand new best make starter/ control panel suitable for following HP centrifugal pump confirming with ISI mark and its latest amendments. 10 to 12 HP centrifugal pump (Page No. 158 / Item No. 13.43.3, BWSSB SR 2023-24)								
		Each	7	1			**7.00**	**35650.00**	**249550.00**
	Basic rate	**35650.00**							
29	Supplying fully automatic star-delta starter unit push button type with suitable wires, 3 contactors, one adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400/440 V 3 phase and wired after fixing to the existing wooden board for motor Above 12.5 HP upto 25 HP (P.14, I.No-5.2.2) Vol-VI [PWD Ele S.R 2023-24]								
		Nos	7	1			**7.00**	**8764.00**	**61348.00**
	Basic Rate	**8764.00**							
30	Supply and delivery at site of brand new best make gate valve as per IS 778/1984 with ISI Mark and as per its latest amendments Size 50 mm [P.154, I.No-13.24.1) Vol-5 BWSSB.SR 2023-24]								
		Each	7	5			**35.00**	**1250.00**	**43750.00**
	Basic Rate	**1250.00**							
31	Supply and delivery at site of brand new best make non-return valve as per IS 778/1984 with ISI Mark and as per its latest amendments Size 50 mm [P.154, I.No-13.25.1) Vol-5 BWSSB.SR 2023-24]								
		Each	7	5			**35.00**	**1250.00**	**43750.00**
	Basic Rate	**1250.00**							
32	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve,indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC60898.. [P.18, I.No-5.18.9) PWD ELE SR 2023-24]								
	For new borewells	**Each**	7	1			7.00	**3088.00**	**40144.00**
	For Existing Borewell		6	1			6.00		
	Basic Rate	**3088.00**					**13.00**		
33	Supplying & fixing of Porcelain fuse channel with cutout on existing wooden/panel using necessary nuts, bolts and washers. (PWD Electrical SR 2023-24 P-14, I-5.7.3)								
	For new borewells	**Each**	7	3			21.00	**401.00**	**15639.00**
	For Existing Borewell		6	3			18.00		
	Basic rate	**401.00**					**39.00**		
34	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. Flat.....with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 40 x 40 x 6 mm (PWD Electrical SR 2023-24 , Page NO:20, Item No:5.41.1).(Per leg 2. 5MtrX2 Nos legs)-5.00 Mtr Per Box.								
	For new borewells	**Rmtr**	7	5			**35.00**	**305.00**	**19825.00**
	For Existing Borewell		6	5			**30.00**		
	Basic rate	**305.00**					**65.00**		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
35	Supply, installing, testing and commissioning COMMON control panel consisting of the following INCOMING:1 No set of Phase indicating lamps with SFU of suitable rating 1 No, Analog Ammeter, 1 No Analog Voltmeter 1ni with Phase selector switch, Isolating switch OUTGOING for Main Electrical Pump: 1 No. MCB 1 No. DOL of S/D Starter suitable for respective HP 1 No. Electrcal Protection Like single Phase preventor, under voltage over Volage, under current over current & dry run protection suitable for the pump described above 1 no Indoor type NOTE: 1) DOL- Direct Online Starter 2) S-D- Star Delta Starter etc. complete.6 to 15 HP pumps (BWSSB, SR 2023-24, P-155, Item No.13.23.3)								
	For new borewells	**Each**	7	1			**7.00**	**15900.00**	**206700.00**
	For Existing Borewell		6	1			**6.00**		
	Basic Rate	**15900.00**					**13.00**		
36	Fabricating supplying and mounting MS box made out 14SWG suitable for floor /wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete., (PWD Electrical SR- 2022-23 , Page No:20, Item No:5.42.1)1200x850x2=2040000, 850x350x2=595000, (350+450)/2=400, 400x1200=480000, 480000x2=960000, 3595000/100=35950Sqcm								
		Sqcm							
	For new borewells		7	35950.00			251650.00	**0.50**	**233675.00**
	For Existing Borewell		6	35950.00			215700.00		
	Rate Analysis						**467350.00**		
	Basic Rate Rs.	0.50							
37	Labour charges for erection of outdoor type panel board and meter board units with all necessary materials and labour, tools and equipments including providing cement concrete foundation bed etc., complete as per specification, with testing of as per instructions of engineer incharge of work. (Page No.156 / Item No. 13.34, BWSSB SR-2023-24)								
		Job							
	For new borewells		7	1.00			7.00		
	For Existing Borewell		6	1			6.00		
	Basic Rate Rs.	**1450.00**					**13.00**	**1450.00**	**18850.00**
38	Yield testing of borewells at final depth with a minimum of 10 hours continuously with the help of pump testing unit including the cost of transportation charges, crew charges and cost of consumables. (Sl No.12.9, Page No.140, BWSSB SR 2023-24)								
		Each							
	For new borewells		7	1.00			7.00	**16306.00**	**114142.00**
	Basic Rate Rs.	**16306**							
39	Supplying of TPST with rewirable porcelain channels in SM enclosure. Made out of 14 SWG powder coated paint of approved colour. 32A (Page No-14 , Item No-5.5.1, ELE SR 2023-24)								
		Nos					21.00	**1701.00**	**35721.00**
	Rate Analysis		7	3.00					
	Basic Rate Rs.	**1701**							
40	Supplying and fixing LED Type panel board indicating lamp with required colour Suitable for 220 V AC 50Hz 12/24 V DC Group 'A' (Page No-19 , Item No-5.38, ELE SR 2023-24)								
		Nos					7.00	**515.00**	**3605.00**
	Rate Analysis		7	1.00					
	Basic Rate Rs.	**515**							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	PVC PIPELINE								
41	**Earth work excavation for pipelines/cables** by Manual means upto 600 mm trench width, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, including dressing of excavated surfaces, disposing off or leveling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m. Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering and lift upto 1.5 m including cost of labour, tools, usage& other appurtenances required to complete the work. (PWD SR 2023-24 Vol -I Pg No 6 item no 1.6.1)								
	For Connecting borewell	**Cum**	7	200.00	0.45	0.75	472.50		
							472.50	**532.40**	**251559.00**
	Basic Rate	**484.00**							
	10% Area Weightage	**48.40**							
	Total	**532.40**							
42	Providing and installing at site of work 6 Kg/m2: 63mm(weight of pipe -0.662 kg) P.V.C. pipes including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour charges and all lift charges, handling charges including encasing the pipe around to a depth not less than 15 cms with gravel or selected earth available from the excavation etc. complete. [P.120, I.No-10.14.8) Vol-5 BWSSB.SR 2023-24]								
	For Connecting borewell	**mtr**	7	200.00			1400.00		
							1400.00	**139.00**	**194600.00**
	Basic Rate	**139.00**							
43	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m , and lift upto 1.5 m. Including cost of all labour complete as per specifications (PWD SR 2023-24 Vol -I Pg No 7 item no 1.10)								
	For Connecting borewell	**Cum**	7	200.00	0.45	0.40	**252.00**	**176.00**	**44352.00**
	Basic Rate	**160.00**							
	10% Area Weightage	**16.00**							
	Total	**176.00**							
44	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density (V-III, P.No-26,I No-4.17)of PWD SR 2023-24)								
	For Connecting borewell	**Cum**	7	200.00	0.45	0.30	189.00		
							189.00	**2814.90**	**532017.00**
	Basic Rate	**2559.00**							
	10% Area Weightage	**255.90**							
	Total	**2814.90**							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amou
			No.	L	B	D			
45	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (V-III, P.No.38, I.No.5.16C of PWD SR 2023-24).								
	For Connecting borewell	Cum	7	200.00	0.45	0.04	25.20		
	Basic Rate	10954.00							
	10% Area Weightage	1095.40					25.20	12049.40	303644
	Total	12049.40							
								Sub Total	893431
								Tender Premium 5%	446715
								GST 18%	160817
								Bescom Charges (7*30000)	210000
								Total	1119920
								Misc and Rounding Off	793.6
								Total Amount	1120000
								Rupees One Crore Twelve lakh	

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on PWD SR, BWSSB SR ,Electrical SR, ESCOM SR 2023-24

AE
Ward -03

Assistant Executive Engineer
Yelahanka Satellite Town Sub Division, BBMP

Executive Engineer
Yelahanka Division, BBMP

Technical Sanction
Accorded For ..112.00.Lak
Head of A/C...P-1802...
CER NO :...46 .... 5/10/

Administrative Sanction for Rs. 112.00 lakhs
Rupees one hundred twelve lakhs
only
is accorded under head P.1802

Registered as CE No. 47 Subject to conditions contained in enclosed memo No. BBMP/E.E./YNK-D/47/24-25 Dt. 06/10/2025

Executive Engineer